

*phius*, *Taphius* and *Tropicorbis* should be united into a single genus, then I strongly support Dr. C. A. Wright's application. My reasons for this are :

(1) That the persons most concerned with these gastropods are the workers on schistosomiasis ;

(2) that *Taphius*, *Planorbina* and *Armigerus* are names rarely used and not generally accepted ;

(3) that *Biomphalaria* is the most widely accepted and extensively used name.

By Emile A. Malek (*Tulane University, New Orleans, Louisiana, U.S.A.*)

I am writing in support of Dr. C. A. Wright's application to suppress the generic name *Planorbina* Haldeman, 1842, *Taphius* Adams & Adams, 1855, and *Armigerus* Clessin, 1884, I am also in favour of his request to place the genus *Biomphalaria* Preston, 1910, on the Official List of Generic Names. This I believe will eliminate the great confusion which exists at present in the generic nomenclature of the intermediate hosts of *Schistosoma mansoni*.

The case in favour of adopting *Biomphalaria* has been clearly presented by Barbosa et al (*Ann. Mag. nat. Hist.* 1961). It seems that *Biomphalaria* is the most appropriate name for the group comprising the following congeneric forms: *Australorbis*, *Biomphalaria*, *Platytraphius*, *Taphius*, *Tropicorbis*, *Armigerus* and *Planorbina*.

By F. S. Barbosa (*University of Recife, Brazil*)

It is well known that the Planorbid snails which are actual or potential vectors of the Trematode *Schistosoma mansoni* in both continents (Africa and America) are generically indistinguishable.

During the last ten years I have been dealing with malacological aspects of Bilharziasis and some of this work has been directed towards the taxonomy of the snail vectors.

Although recognizing that the genera *Taphius* H. & A. Adams, 1855 ; *Biomphalaria* Preston, 1910 ; *Tropicorbis* Pilsbry & Brown, 1914 ; *Platytraphius* Pilsbry, 1924 and *Australorbis* Pilsbry, 1934, are congeneric I have been conservative in using the old generic names until a decision of the Commission.

Besides the above genera, *Planorbina* Haldeman, 1842 stands as probably the oldest generic name to be applied to the group of snails under question.

Now, however, when a final decision is to be taken by the Commission I am convinced that the suggestion proposed by Dr. C. A. Wright in supporting *Biomphalaria* is the most judicious by the reasons already exposed by him.

I express my full support for Dr. Wright's application in asking the Commission to place *Biomphalaria* on the Official List of Generic Names, suppressing the other generic names.

Papers by Dr. F. S. Barbosa dealing with the problem :

Barbosa, F. S., 1958. The snail hosts of *Schistosoma mansoni* and transmission of schistosomiasis in Brazil. XVth International Congress of Zoology, Sect. VIII, paper 18, London

Barbosa F. S. and Carneiro, E., 1959. Moluscos Africanos e Sul Americanos da Tribo *Biomphalaria* (Planorbidae). Actas y Trabajos del Primer Congreso Sudamericano de Zoología. Tomo II, Buenos Aires

Barbosa F. S., 1960. Proven and Potential Vectors of the Trematode *Schistosoma mansoni* in South America. (*Rev. Brasil Biol.* 20(2) : 183-190)

REPLY TO H. J. WALTER'S OBJECTION TO THE PROPOSAL TO SUPPRESS *PLANORBINA* HALDEMAN, 1842, *TAPHIUS* ADAMS AND ADAMS, 1853, AND *ARMIGERUS* CLESSIN, 1884

By C. A. Wright (*British Museum (Natural History), London*)

Walter's objections to my application appear to be based on the assumption that I have no experience of the problem and on certain technical features which are not

mentioned by other workers but which he considers to be of taxonomic importance.

In reply I would like to make it clear that I am probably the only individual concerned in this controversy who has examined the type-specimens of *Taphius andecolus* and *Biomphalaria smithi* and who has also dissected topotype material of both these species and of *Platytyphius heteropleurus*. In my application to the Commission I quoted published papers by other authors for the sake of brevity and in order to avoid tedious repetition.

Walter's comparisons between the gross genital anatomy of *Biomphalaria* and *Bulinus* are irrelevant to the discussion and he appears to have overlooked Larambergue's excellent description of *Bulinus* (*Bull. Biol.* 73(1-2), 1939) and my own histological comparison between the reproductive system of *Bulinus* (*Bull. Brit. Mus. (Nat. Hist.) Zool.* 5(1) : 1-28, 1957) and that of *Biomphalaria* (Malek, *Trans. Amer. micr. Soc.* 73(3) : 285-296, 1954).

Walter's point concerning the nidamental gland in *Biomphalaria* and *Taphius* is based on differences in their superficial appearance and relative size. This structure varies in appearance with the maturity of the snail and it is usually more voluminous in forms whose whorls increase rapidly in size than it is in the long-bodied species whose whorls increase less rapidly. This is excellently illustrated by several species of the planorbid genus *Gyraulus*. The two species on which Walter appears to have worked are *Biomphalaria pfeifferi* and *Australorbis glabratus*, both species with relatively slowly increasing whorls, and his comparison is made with Paraense's illustrations and description of *Taphius andecolus*, a species whose whorls increase in size very rapidly. Much the same argument applies to his discussion of the prostate. The organ in *Taphius* is definitely not like that in *Bulinus* and the prostate in *Biomphalaria smithi* is of a more contracted form than that in the long-bodied species.

Walter quotes F. C. Baker as saying that the embryonic whorl of *Platytyphius* is punctate and he uses this statement to suggest that if, perhaps, the embryonic whorl of *Taphius* is also punctate then it will be evidence of its closer relationship to *Bulinus* than to *Biomphalaria*. Walter has failed to differentiate between the coarse, regular punctate pattern present in *Bulinus* and the extremely fine punctation present in most *Biomphalaria* (which Walter appears to have overlooked). I have compared topotype specimens of *Platytyphius heteropleurus* with the type series of *Taphius andecolus* and *Biomphalaria smithi* and all three species have an extremely fine punctate sculpture of the embryonic whorl which is also present in laboratory bred specimens of *Biomphalaria sudanica* and *B. rueppelli*.

Finally Walter draws attention to the distinctive shell shape of *Taphius andecolus* and suggests that this alone is sufficient reason for the wide generic separation of *Taphius* and *Biomphalaria*. *T. andecolus* is in fact a lake-dwelling species (L. Titicaca) and it resembles some of the *Biomphalaria choanomphala* species group from the East African lakes more closely than these lake forms resemble the other African *Biomphalaria*.

In the light of Walter's comments I have re-examined the material available and have no reason to alter my original opinion, shared with many other workers who have had personal experience of the problems involved, that *Taphius* and *Biomphalaria* are congeneric. I also continue to believe that the best interests of nomenclature will be served by the suppression of the names *Planorbina*, *Taphius* and *Armigerus*.

#### COMMENTS ON THE PROPOSED VALIDATION OF *PARTHENOPE* FABRICIUS, 1798. Z.N.(S.) 1487

(see vol. 19, pages 58-60, 314)

By John S. Garth (*Allan Hancock Foundation, Los Angeles, California, U.S.A.*)

The following comments are submitted for consideration by the International Commission on Zoological Nomenclature in connection with the proposal by Dr. L. B. Holthuis calling for the suppression, under the plenary powers, of the